



●Absolute maximum ratings (Ta=25°C)

Parameter	Symbol	Limits				Unit
		DTC123EM	DTC123EE	DTC123EUA	DTC123EKA	
Supply voltage	V <sub>CC</sub>	50				V
Input voltage	V <sub>IN</sub>	-10 to +12				V
Output current	I <sub>o</sub>	100				mA
	I <sub>C(Max.)</sub>	100				
Power dissipation	P <sub>d</sub>	150	200			mW
Junction temperature	T <sub>j</sub>	150				°C
Storage temperature	T <sub>stg</sub>	-55 to +150				°C

●Electrical characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Input voltage	V <sub>I(off)</sub>	-	-	0.5	V	V <sub>CC</sub> =5V, I <sub>o</sub> =100μA
	V <sub>I(on)</sub>	3	-	-		V <sub>o</sub> =0.3V, I <sub>o</sub> =20mA
Output voltage	V <sub>O(on)</sub>	-	0.1	0.3	V	I <sub>o</sub> /I <sub>i</sub> =10mA/0.5mA
Input current	I <sub>i</sub>	-	-	3.8	mA	V <sub>i</sub> =5V
Output current	I <sub>O(off)</sub>	-	-	0.5	μA	V <sub>CC</sub> =50V, V <sub>i</sub> =0V
DC current gain	G <sub>I</sub>	20	-	-	-	V <sub>o</sub> =5V, I <sub>o</sub> =20mA
Input resistance	R <sub>1</sub>	1.54	2.2	2.86	kΩ	-
Resistance ratio	R <sub>2</sub> /R <sub>1</sub>	0.8	1	1.2	-	-
Transition frequency	f <sub>T</sub> *	-	250	-	MHz	V <sub>CE</sub> =10V, I <sub>E</sub> = -5mA, f=100MHz

\* Characteristics of built-in transistor

●Electrical characteristic curves

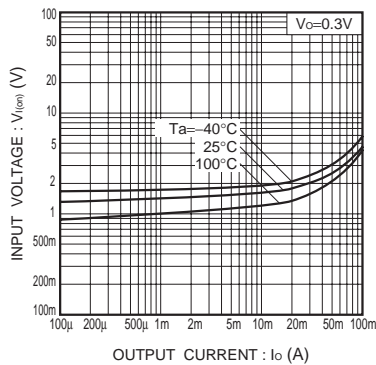


Fig.1 Input voltage vs. output current (ON characteristics)

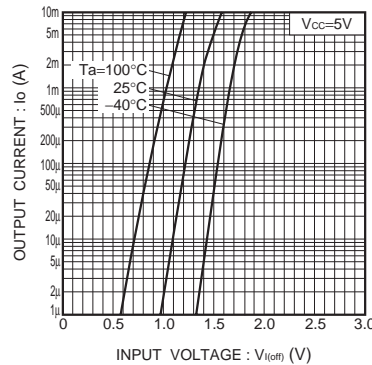


Fig.2 Output current vs. input voltage (OFF characteristics)

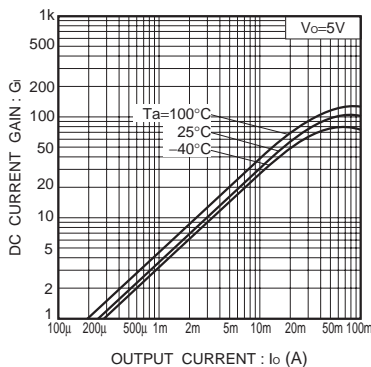


Fig.3 DC current gain vs. output current

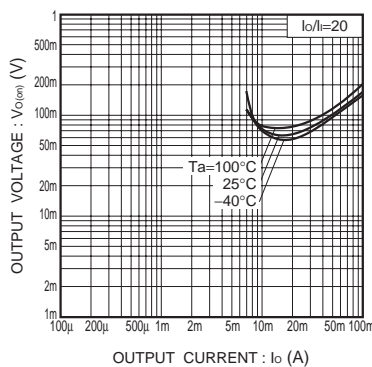


Fig.4 Output voltage vs. output current

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